REMARKS/ARGUMENTS

Claims 1-31 remain pending in this application and stand rejected under 35 U.S.C. 102(e) as being anticipated by Rebane (United States Patent Number 6,405,179 B1). Applicants respectfully traverse these rejections for at least the reasons that follow. With regard to claim 1 the Examiner asserts:

> Rebane discloses a computer-implemented method of constructing a portfolio having a utility defined by at least a first function and a second function, the computer-implemented method comprising:
>
> selecting a plurality of asserts in the portfolio (abstract; fig. 6 and associated text); and
>
> maximizing an expected utility of the portfolio (fig. 6 and associated text); wherein the at least first function is a power-utility function having a first power defining the degree of risk aversion of a holder of the portfolio and wherein the at least second function is a power-utility function having a second power defining the degree of risk aversion of the holder of the portfolio, wherein the first power is different from the second power (figs. 7-12 and associated text).

Rebane describes an empirical method for estimating an investor's risk tolerance via a risk tolerance function, that is commonly referred to as a utility function. Rebane uses a classical mean-variance methodology to calculate the investment weights in the investor's portfolio. The mean-variance methodology has been disclosed as prior art in the instant application (Page 1 line 20 through Page 2, line 12).

Representing an investor's preferences with a utility function is well known in the art, and is shown, for example, as g(A) in FIG. 3 of Rebane. Rebane describes a method for determining a utility function in column 4, lines 59-67, column 5, lines 1-57, column 17, lines 59-67, and column 18, lines 1-54.

Rebane's method results in an empirical utility function based on a few points that are derived by asking the investor a number of investment questions. These questions require that the investor

define values for AH = a putative best amount, AD = a putative worst amount, and AT = investor's total net current assets. Next, the investor is asked to choose between various alternative investment options each having an associated gain and loss. Rebane describes in column 18, lines 50-54:

> About four or five points are usually needed to accomplish this. During optimization a smooth analytical regression function is dynamically fitted to a subset of these points over the monetary 'region of activity' to yield the desired RTF that is used in the portfolio design methods below.

Rebane's utility function is thus purely empirical and depends entirely on the choices made by the investor. Therefore, contrary to the Examiner's assertions, there is no disclosure in Rebane of a power-utility function. A power-utility function is shown, for example, on page 6 of the instant application, and reproduced, in part, below:

$$U = \frac{1}{\gamma}\left[(1+r)^{\gamma} + \gamma - 1\right] \quad \text{for } r < 0,$$

where γ is the power of the utility function.

Rebane, in column 23, lines 64-67, and column 24, lines 1-26, describes the use of a truncated Taylor series to approximate the estimated risk utility function with the quadratic utility function, shown in equation (20). As can be seen, the first term in equation (20) is a linear term and the second term is a quadratic term. As is well known, a quadratic utility function for selecting an investor's portfolio is equivalent to the classical case where the mean and the variance of the probability distribution of portfolio return (or value) are used for selecting the investor's portfolio, as shown in Rebane's Equation (22). The first term in Equation (22) depends on the mean, and the second term on the variance.

As stated above, however, neither truncated Taylor series of the empirical utility function of Rebane, shown in equation (20), nor the mean-variance function shown in equation (22) of

Rebane is a power utility function. Neither of these equations contain variable power coefficients, such as the power coefficient γ of the power utility function in accordance with the present invention and shown above. Because Rebane fails to disclose a power utility function, as defined in the instant application, Rebane fails to teach or suggest "wherein the at least first function is a power-utility function having a first power defining the degree of risk aversion of a holder of the portfolio and wherein the at least second function is a power-utility function having a second power defining the degree of risk aversion of the holder of the portfolio...", as recited in part, in claim1. Claim 1 and its dependent claims 2-7 are thus allowable over Rebane for at least the reasons described above. Claims 8-31 are allowable over Rebane for at least the same reasons as is claim 1.

Claim 2 is further allowable over Rebane for reciting, in part, "....wherein the at least first power-utility function defines the utility of the portfolio for positive rates of returns and wherein the at least second power-utility function defines the utility of the portfolio for negative rates of returns", which Rebane fails to teach or suggest.

Claims 3 and 4 are further allowable over Rebane for reciting, in part, "wherein the at least first power-utility function is a log-utility function", which Rebane fails to teach or suggest.

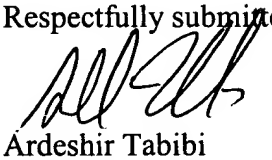
Claim 6 is further allowable over Rebane for reciting, in part, "assigning a probability point to the occurrence of each one of a plurality of economic events; computing the utility of the portfolio for each economic event; multiplying the utility of portfolio computed for each economic event with the probability of the occurrence of that economic event thereby generating a plurality of values; and summing the values", which Rebane fails to teach or suggest.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application, namely claims 1-31, are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (650) 752-2424.

Respectfully submitted,



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